

**A Validity Study of the Bridge Drawing with Path as a Predictor of Future
Orientation for Young Adults in a Post Quarantine Era**

Debbie Mendez

Albertus Magnus College

Submitted in partial completion of the requirements for the degree of
Master of Arts in Art Therapy and Counseling (MAATC)

July 2023

DATE: 2/3/23

Re: IRB# 20230203-DM

Dear Debbie Mendez,

Institutional Review Board (IRB) Albertus Magnus College

This letter serves as an official approval by the Albertus Magnus College IRB for you to conduct the study on “bridge drawing and future orientation of young adults” as described in the IRB application submitted on 2/1/23. Please ensure that the confidentiality of your research participants is properly protected and that you remain within the boundaries you stated in the IRB application. If those boundaries change in relation to the study participants, please notify the IRB as an amendment may be necessary.

Your study is authorized to begin as of the date of this approval letter and is valid for one year, ending on February 3rd, 2024.

If you have any questions, please contact Dr. Joshua Abreu, the IRB Administrator, by e-mail at jabreu1@albertus.edu.

Sincerely,

Joshua Abreu, Ph.D. IRB Administrator

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I would like to thank my family, especially my mother, who taught me the value of hard work. My father, for migrating to the United States so that I could be afforded the opportunity of higher education. My partner, Samuel Diaz III who held me when life felt unmanageable. Most of all my greatest inspiration, Samuel Diaz IV. I would not have made it this far without you.

I am grateful to all the college students that participated in this study. I wish them all the best in achieving their future goals.

Abstract

The present validity study examined the relationship between the Bridge Drawing with Path (BDP) art-based assessment (Darewych, 2013) and the Future Time Perspective scale (FTP) (Brothers et al., 2014). Both assessments are designed to measure an individuals' views of their future. For the present study, future orientation was conceptualized via the Johnson et al (2016) cognitive/social model. This model is particularly relevant in the lives of emerging adults because it highlights both individual experiences and environmental influences in the development of future orientation. A combination of convenience and snowball sampling was used to recruit forty college students between the ages of 18 and 25. A factorial MANOVA analysis was used, and the results yielded no statistically significant effect of the five independent image variables on the combined dependent variables of the FTP test scores. The researcher created a rating manual to score the BDP assessments and trained three art therapy professionals to rate the drawings. Intra-class correlation coefficients were used to assess inter-rater reliability. The author hypothesized that there would be a statistically significant relationship between an individual's FTP score and the graphic indicators found on the same individual's BDP assessment. The purpose of this study was to fill the void in literature regarding projective art techniques and contribute to the research that has already been conducted with the BDP.

While the repercussions of the March 2020 quarantine phase of the COVID-19 pandemic were experienced across many populations, college students were among the most dramatically affected (Browning, 2021). Prior to the COVID-19 pandemic, young adults were already recognized in the mental health field as a particularly vulnerable population. For many, moving to a college campus marks the first time living away from home (Browning, 2021). Naturally, there is pressure to be academically successful, to have a robust social life, to plan for the future and to understand who they are becoming (Browning, 2021). With the implementation of the stay-at-home order, college students experienced a disruption in their newly acclimated lives on campus. Mandatory school closures forced students back into the parental home where they were expected to quickly adjust to virtual learning while simultaneously dealing with feelings of isolation, loneliness, fear of contracting the virus and uncertainty of their future (Browning, 2021). Projective art assessments are an invaluable tool in helping mental health professionals better understand the effects of the ongoing pandemic on college students, as well as how they envision their future. To this end, the current study will explore the use of the Bridge Drawing with Path (BDP) as a predictor of future orientation with young adults in a post quarantine era.

The Concept of Future Orientation

Future orientation has been described through various conceptual frameworks throughout literature with dimensions that include optimism, confidence, hope, meaning in life, future perspective and future expectations (Shubert et al., 2020). Trommsdorff (1980) noted that future orientation as being comprised of motivational and behavioral components, acknowledging the influence of social experiences on future orientation development. Nurmi

(1989) took a thematic approach to the concept of future orientation in adolescents, breaking it down into three basic processes: motivation, planning, and evaluation. In this framework, future orientation is a cognitive activity and a critical milestone in adolescent development (Nurmi, 1989). Building on the previous research, Johnson et al. (2016) combined the cognitive and social lenses of future orientation into one overall construct comprised of three core components: expectations, aspirations, and planning, believing that these components change and develop beginning in early childhood and continuing into adulthood (Johnson et al., 2016). This model highlights the cumulative impact of individual experiences and the environment over time on the evolution of future orientation. For the purposes of this study, future orientation was conceptualized via the Johnson et al (2016) cognitive/social model.

Young Adults

The concept of future orientation has been studied with a range of populations, from early childhood to mature adulthood (Browning et al., 2021; Hall & Zygmunt, 2021; Seginer, 2019; Shubert et al., 2020). However, most of the research focused on adolescents, given the fact that planning for adulthood is a natural function in their development (Seginer, 2019). Young adults who are transitioning into a new stage of life and development are more vulnerable than those who have had the time to adjust (Seginer, 2019). Not surprisingly, this population was most vulnerable to the social impact of the COVID-19 pandemic. Hall and Zygmunt (2021) found that college students self-reported a decline in their mental health after returning home in the initial stages of the stay-at-home order of March 2020. Notably, freshmen were at higher risk for declining mental health conditions as compared to seniors, indicating greater vulnerability at the beginning stages of transition (Hall & Zygmunt, 2021).

The launching and transition patterns of young adults have changed in recent years, as noted by an increase in the number of college graduates who live in the parental home (South & Lei, 2015). However, little research has explored the motivation of the exiting and returning of young adults to live with their parents (also known as boomerang kids), outside of historical economic events such as the Great Depression, WWII, and the Great Recession. South and Lei (2015) used life-course theoretical framework to explore the impact of this trend noting that milestones such as starting college and the desire to move in with a romantic partner are reasons for one to move out, while graduating from college and the end of a romantic relationship can influence young adults to return to the parental home.

Projective Drawings in Assessment and Treatment

Machover (1949) first used human figure drawings as a way to understand projective unconscious material as predictive of personality features. Using in-depth case studies, Machover identified specific graphic indicators in the drawings that might predict certain traits or internalized conflicts. This work became the basis for projective arts-based assessments that are used in clinical diagnosis and treatment. While projective art assessments have been an effective tool for clinicians to use with their clients, there continues to be a need for stronger validity and reliability of this measure in the field of art therapy (Handler & Thomas, 2014). Building on Machover's (1949) ideas about projective drawings, Hays and Lyons (1981) developed the Bridge Drawing (BD) as a tool for assessing adolescent perceptions of normative transitions through the depiction of a bridge. Using 12 identified graphic indicators, the BD assessment was shown to indicate feelings, thoughts, and concerns around a participant's life orientation and problem-solving strategies. This is especially true during a stage of life that is both physically and emotionally challenging. Some of those indicators include placement of self

in the image, solidarity of bridge attachments, and matter underneath the bridge. Research on the BD included other populations consisting of adults with autism spectrum disorder (Darewych et al., 2018), orphans (Darewych, 2013), individuals experiencing psychosis (Teneycke et al., 2009), and adults with substance use disorder (Hanes & Rojas, 2021). Darewych (2013) added the element of a path to the bridge drawing to encourage underlying feelings about one's future. This modified version of the BD was called the Bridge Drawing with Path (BDP) and subsequent research utilized both versions of the directive with various populations (Darewych, 2013; Darewych & Brown, 2016).

Conclusion

Recently, young adults are presenting as the largest populations with declining mental health (Shubert et al., 2020). The COVID-19 pandemic crisis has only deepened this issue, specifically with those who experienced a disruption while transitioning to a new phase in their lives (Hall & Zygmunt, 2021). Life planning and future orientation are important factors in development; therefore, projective art assessments can be an invaluable tool in understanding how young adults imagine their futures. The purpose of this study was to contribute to the research that has been conducted in the field of art therapy and the application of projective drawing techniques as a predictor of future orientation during unprecedented times. The author hypothesized that there would be a statistically significant relationship between an individual's Future Time Perspective (FTP) score and the graphic indicators found on the same individual's BDP assessment.

Method

Participants

The current study utilized a combination of convenience and snowball sampling procedures to recruit young adult college or university students between the ages of 18 and 25. The researcher attempted to recruit a culturally diverse sample from a New England college campus and the surrounding area. A total of 40 subjects were recruited by way of digital flyers on social media, friendship networks through email, and printed flyers posted on a New England college's campus common area, as well as in retail spaces and bookstores.

Instruments

Demographic Information

Participants were asked to complete a demographic form that included questions on their race, ethnicity, current gender identity, age, year of high school graduation, year they entered college, current year they are in college, and living arrangements.

Future Time Perspective Scale

The Future Time Perspective scale (FTP: Brothers et al., 2014) was also administered to participants. This is a self-rated 12-item questionnaire that utilizes a five-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The items listed on the FTP scale are designed to measure a person's view of their future. The value of each of the items on the FTP scale are interpreted using three categories: *future as open*, *future as limited*, and *future as ambiguous*. Cohen's kappa coefficient was used to determine interrater reliability. The result was a range between 0.86 and 1.0 (mean = 0.93) indicating high agreement between the raters, thus

good content validity. To further assess validity exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were also used to establish and confirm the framework of the FTP scale. In addition, convergent validity was explored by calculating zero-order correlations between the FTP scales with the associated psychological constructs. As a result, *future as open* was strongly correlated to optimism, extraversion, and satisfaction with life while *future as limited* was significantly correlated to depressive symptoms and neuroticism. *Future as ambiguous* showed a stronger correlation with both constructs. Divergent validity was identified in the mixed pattern of correlations within the three FTP scale categories (Brothers et al., 2014). Lastly, regarding reliability, the coefficients of internal consistency, Cronbach's alpha, ranged from 0.70 to 0.77, indicating acceptable reliability.

Bridge Drawing with Path

Participants were given one white 9 x 12-inch (22.86 cm x 30.48 cm) sheet of drawing paper and a sharp No. 2 lead pencil. They were asked to "Draw a bridge from someplace to someplace. The bridge connects to a path. Draw the path and write where the path leads you to. Use an "X" to indicate where you are located on either the bridge or the path" (Darewych, 2013). Participants were also provided with a printed version of the instructions in English. The researcher modified the placement of self on either the bridge or the path to place emphasis on where exactly the student sees oneself within the image. The modification could provide deeper information on how participants relate to themselves within the context of change and transition. The BDP typically takes approximately 10-15 minutes to complete, however, participants were given as much time as needed to complete their drawing.

Procedure

After IRB approval, flyers were sent out electronically and posted on a New England college campus's common area. Flyers were also posted at a local retail store with college age employees, and local coffee shops and bookstores in the area. Participants attended a single session in a quiet meeting room designated for the research study. Study sessions were held individually or in dyads. Once participants arrived to the study session, they were welcomed and given the informed consent and image release forms. These forms were read aloud and explained by the researcher. Informed consent forms and signed art release forms were collected and immediately placed in a designated envelope. All signed forms were stored in a locked cabinet separate from the data and were only available to the researcher.

Next, participants were provided with a demographic form to complete, and then the FTP scale questionnaire. Upon completion of these two items, they were asked to place the forms to the side. They were then given an instruction sheet for the BDP directive, a single sheet of 9 x 12-inch (22.86 cm x 30.48 cm) drawing paper and a sharp No. 2 pencil. In addition to the written instructions for the art directive, verbal instructions were also given. The researcher asked participants to "Draw a bridge from someplace to someplace. The bridge connects to a path. Draw the path and write where the path leads you to. Use an "X" to indicate where you are located on either the bridge or the path."

Upon completion of the art-based assessment the researcher collected the materials. The demographic form, FTP questionnaire and artwork from each participant were placed in a sealable folder, separate from the signed consent and image release forms. Confidentiality was maintained by providing each participant with their own unique participation ID number. They were reminded not to put their names on any of the forms.

Lastly, a debriefing letter was provided to all participants. The debriefing handout was read aloud by the researcher who asked the participant(s) to read along. Participants were given the opportunity to ask questions before, during and after the study session.

An ordinal rating scale manual for the BDP was created by the researcher (Appendix G). The artwork was scored by three raters who are qualified and experienced art therapy professionals. Before rating the images, the raters attended a 90-minute training session conducted by the researcher via Zoom™, a secure online conferencing platform. The BDP manual focused on six unique image variables as well as written associations. The rating scale includes four of the twelve Bridge Drawing original image variables as described by Hays and Lyons (1981): (1) placement of self in picture, (2) solidarity of bridge attachments, (3) matter underneath the bridge and (4) bridge construction. The researcher added two image variables to the manual: (5) weather and (6) the inclusion of additional supports/structural reinforcements underneath the bridge. In addition, due to the inclusion of the path with written instruction, the rating scale consisted of one additional variable: (7) written associations (Darewych, 2013).

Results

The present study included 40 participants (21 women, 18 men and 1 non-binary individual) between the ages of 18 and 25 ($M = 20.78$, $SD = 2.26$). All participants were enrolled in college or university. With respect to self-reported race, 32 identified as White, 3 as Black, 1 as Asian, 1 as Pacific Islander, and 3 individuals reported their race as other. Regarding ethnicity, 13 participants identified as Hispanic, and 27 participants identified as non-Hispanic. Regarding education, 8 students were freshmen, 10 students were sophomore, 3 students were juniors, 14 students were seniors, and 5 students were unsure of their academic classification level. With reference to the March 2020 COVID-19 stay-at-home order, 17 individuals reported

a disruption in how they attended college. Regarding living arrangements, 23 participants reported living off campus with parents, 7 on campus housing, 7 off campus (not with parents) and 3 participants did not specify.

Three raters blind to the hypothesis of the study were selected and trained to rate image variables of the forty drawings collected. All three raters were art therapy professionals that had between two and six years of experience in the field. Raters were provided with an Excel® rating sheet (Appendix H) to input their scores for each drawing. To establish inter-rater reliability a modification of Cohen's Kappa (1960) was conducted to derive the mean kappa across all rater pairs (Light, 1971), as suggested by Hallgren (2012). The data for bridge construction was not analyzed because it fell below an acceptable score for inter-rater reliability (0.57, weak agreement). The Kappa results of the inter-rater analysis are displayed in Table 1. Five of the six image variables ranged from 0.66 (moderate agreement) to 1.0 (perfect agreement).

Table 1

Inter-rater Kappa Agreement for Bridge Drawing with Path

BDP Image Variable	Average	Kappa Agreement*
Placement of Self	0.93	Almost Perfect Agreement
Bridge Attachments	0.66	Moderate Agreement
Additional Attachments	0.96	Almost Perfect Agreement
Matter Underneath the Bridge	0.92	Almost Perfect Agreement
Bridge Construction	0.57	Weak Agreement
Weather	1.0	Perfect Agreement

*(Cohen, 1960)

Perfect agreement was found for the weather image variable. Almost perfect agreement was obtained for the following image variables: placement of self, additional attachments, and matter underneath the bridge. Moderate but still acceptable agreement was found for bridge attachments. Weak agreement was found for bridge construction, which is a variable that has historically been omitted from studies due to inconsistent inter-rater reliability (Darewych, 2013).

Results of the factorial MANOVA yielded no statistically significant difference between the five independent variables of *placement* $F(3, 22) = 1.66, p = .205$; *Wilk's A* = 0.816, with medium effect size (*partial* $\eta^2 = .184$) and low power (.37), *attachment* $F(3, 22) = 1.41, p = .267$; *Wilk's A* = 0.839, with large effect size (*partial* $\eta^2 = .161$) and low power (.32), *matter under the bridge* $F(3, 22) = 0.82, p = .496$; *Wilk's A* = 0.899, with large effect size (*partial* $\eta^2 = .101$) and low power (.20), *weather* $F(3, 22) = 0.87, p = .966$; *Wilk's A* = 0.988, with small effect size (*partial* $\eta^2 = .012$) and low power (.06), and *additional attachments* $F(3, 22) = 0.63, p = .601$; *Wilk's A* = 0.920, with small effect size (*partial* $\eta^2 = .080$) and low power (.16) on the combined dependent variables of the FTP scores.

A post hoc power analysis was conducted using G*Power version 3.1.9.7 (Faul et al., 2007) for sample size estimation as a follow-up analysis, based on the nonsignificant findings. With a significance criterion of $\alpha = .05$ and power = .80, the minimum sample size needed for an effect size of .0625 is $N = 100$ for a factorial MANOVA (5 groups, 3 dependent variables). Thus, the obtained sample size of $N = 40$ is likely not adequate to test the study hypothesis.

As part of the BDP directive, participants were instructed to write where the path leads them. In addition to the statistical analysis, participant's written responses were thematically analyzed using a descriptive/inductive method with manual open, axial, and selective hand

coding (as described by Strauss & Corbin, 1990) to identify common themes that relate to future orientation in young adults. Notably, there were differences across gender.

Table 2 shows the percentage of participants referencing themes that were observed in reviewing the content of the written narrative. Some of the most frequent themes expressed by participants were: home/family/children, opportunity, and house/cars/money/wealth. The theme of home/family/children was mentioned by 6 women and 1 man. The word opportunity was mentioned by 4 women but was not used in any of the drawings created by men. The theme of house/cars/money/wealth was used by half of the male participants ($n = 9$) but was not found in any of the drawings of female participants.

Table 2

Emergent Themes in the Descriptive Text by Gender

Theme	Percentage of female responses ($n = 20$)	Percentage of male responses ($n = 18$)
Home/Family/Children	30%	5%
Opportunity	20%	0%
House/Cars/Money/Wealth	0%	50%

BDP Image Frequencies

Axis of paper

For this study, subjects were given one 9 x 12-inch (22.86 cm x 30.48 cm) sheet of drawing paper and a No. 2 pencil to complete the BDP directive. The researcher handed each

participant the sheet of drawing paper by holding one corner of the paper, to not influence portrait or landscape orientation. Thirty-three participants (83%) drew the bridge and path along the horizontal axis. This result is consistent with both BDP studies conducted by Darewych (2013) as well as past BD studies (Hays & Lyons, 1981), where most participants created their drawings along the horizontal axis.

Vantage point of the viewer

In the BDP assessment, some possible vantage points are eye level, viewed from above (bird's-eye view), or viewed from below (worm's-eye view). Hays and Lyons (1981) suggest that bird's-eye-view may be indicative of a participant's desire for power or control. In the current study, 4 participants (10%) completed their drawings from the bird's-eye perspective, and 36 participants (90%) completed their drawings from the eye level perspective which is consistent with previous research (Darewych, 2013; Hays & Lyons, 1981). There were no participants that depicted their BDP from a worm's-eye view.

Bridge type

Nearly half (48%) of the female participants drew bottom arched bridges. These results support previous research that females are more likely to draw bottom arched bridges (Darewych, 2013; Hays & Lyons, 1981). It should be noted that 20% of male participants also drew bottom arched bridges. Hays and Lyons (1981) did not report their findings of how many male participants drew bottom arched bridges.

Discussion

The researcher hypothesized that there would be a significant relationship between a participant's FTP score and the graphic indicators found on their BDP assessment. There was no statistical significance found between the combined three dimensions of the FTP score and the

five image variables examined in the BDP assessment. However, in examining the follow-up tests for exploratory purposes, there was very close to significance across the limited dimension of the survey, suggesting a possible relationship between those who scored high in the limited dimension and the negatively associated attachment and placement variables which warrants further study.

Several themes emerged in the artwork that were notable. For example, those who scored high open, low limited, and low ambiguous had more suns in their skies. This could suggest a relationship between weather (as an external event) and its influence on the way an individual views their current circumstances. Others in this category of artwork included a lot of added environmental details in their drawings such as trees, flowers, birds in the sky and additional people. These types of graphic indicators could suggest a more optimistic attitude regarding one's future as well as overall higher functioning.

Figure 1 was illustrated by a 21-year-old female participant whose FTP scores were: high in future as open, low in future as limited and low in future as ambiguous. These scores suggest that she has a positive concept of her future. She drew a bottom-arched bridge, securely attached to land on both ends. The drawing is elaborate and features beautiful weather in the sky, and a rich environment including water, flowers, birds and trees. The written association linked to her path was: "The bridge leads me to the future I dreamed about as a child with every opportunity in front of me!"

Figure 2 was created by a 24-year-old female participant who scored high in future as open, high in future as limited and medium in future as ambiguous. This is an example of a drawing that is less optimistic than the drawing shown in Figure 1, specifically the insecurity of the bridge connections to land masses. Overall, there are less details and an obvious emptiness in

the area underneath the bridge. The written narrative connected to her path was: “The path leads to home and a family.”

Figure 3 was created by a 20-year-old male participant who scored medium in future as open, high in future as limited and high in future as ambiguous. The drawing lacks weather and environment, and placement of self is somewhat in the air. The bridge’s construction is marked by short, broken lines, not securely attached on either end and is labeled “the unknown bridge”. The focal point of the drawing is the path to wealth, which is not a realistic depiction of a future.

Some common written associations that were found across the male participants included themes of house, cars, money, and wealth. Conversely, female participants mentioned themes of home, family, and children in their written narratives. This pattern and clear difference between men and women could suggest that young adults are impacted by society’s gender-specific expectations when they are thinking about their futures as successful individuals.

Limitations and Future Research

One limitation of the current study is that the BDP is a one-drawing measure. Single drawing arts-based measures may only provide a snapshot of how an individual perceives a situation, idea, or circumstance (Ulman, 1965). Without a series of drawings and/or multiple drawings over time, it may not be possible to gather a complete and accurate view of how one sees their future orientation. The second limitation is that the overall sample size was small ($n = 40$) which contributed to a lack of statistical power. Another limitation is the composition of the sample. While there was an effort made by the researcher to recruit a diverse sample, more than half ($n = 32$) of the participants identified as White.

In reviewing the BDP inter-rater agreement scores, perfect agreement was found across the weather variable, and almost perfect agreement was obtained for placement of self, additional

attachments and matter underneath the bridge image variables. Moderate agreement was found for the bridge attachment variable. An acceptable agreement was not reached for the bridge construction image variable, which is consistent with the studies conducted by Darewych (2013) and Teneycke et al (2009). Future research should reflect adjustments to the subscales of these two image variables to improve inter-rater agreement.

The present study is the first of its kind to explore the use of the Bridge Drawing with Path exclusively with young adults enrolled in college. Future research should extend this study with adults that are facing different types of transitions. For example, older adults preparing for retirement age. Also, adults undergoing cancer treatment would be a valuable population for future research. These individuals face a great deal of unexpected life transitions such as physical changes and in many cases, having to prematurely think about their own mortality. Such research may incorporate the use of different surveys that measure meaning in life in addition to future orientation. In the clinical setting, both FTP scale and BDP can be introduced at intake to obtain a snapshot of a client's perspective of their future and could be readministered at termination in order to assess therapeutic outcomes.

Conclusion

While it is still too soon to fully understand the impact of the COVID-19 quarantine period on college students, the pandemic has forever changed the way college students receive their education and their perception of the future. As a population that has already proven vulnerable, the pandemic has increased anxiety about finances and finding work; isolation and stress has contributed to mental health needs (Browning, 2021). College students should have their mental health needs prioritized by faculty, researchers, and mental health professionals.

While there are limited published findings of validity studies supporting the use of projective art assessments, drawings have been long used by art therapists to create an opportunity for meaningful dialog with a client about concerns that may or may not have been realized before the drawing was created. The Bridge Drawing with Path assessment is a useful tool to use with young adults that can offer a glimpse of how a person orients to their future. The present study contributes to the adult database that was established by Darewych (2013) on the use of the Bridge Drawing with Path in art therapy. The researcher hopes that the results of this study will inspire future validity studies that focus on projective art techniques with young adults.

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Appendix A

Informed Consent Form

This study is being conducted as part of the requirements for the Masters in Arts of Art Therapy and Counseling degree at Albertus Magnus College. The purpose of this study is to explore how college students visualize their future. During this study session, you will be asked to complete a demographic form which will be followed by a 12-question survey about how you view your future. Lastly, you will be directed to complete the Bridge Drawing with Path. Please note that your art-making abilities are not a factor in this study. All information collected will be confidential. To maintain confidentiality, the artwork created during this study will be numbered and your name will not be connected to the work in any way. Overall, this one-time study will take approximately 30 minutes.

Potential risks involved with participation in this study may include frustration with the art making process and possible negative feelings from the survey mentioned above. Participation in this study is completely voluntary. You may choose to withdraw from the study session at any time and can ask to have your drawing and survey removed from the study. Benefits of participating in this study session may include an increase in self-awareness and personal insights regarding your present and future life goals. You may also enjoy the art activity. This study has been approved by the Albertus Magnus College Institutional Review Board (IRB).

If you have any questions or concerns about this research, you may contact the following individuals:

Researcher: Debbie Mendez, ddmendez@albertus.edu

Art Therapy Advisor: Lisa Furman, Ph.D., ATR-BC, LPC, lfurman@albertus.edu

Psychology Advisor: Bonnie Pepper, Psy.D., bpepper@albertus.edu

Chair of IRB: Sean O'Connell, Ph.D., soconnell@albertus.edu

By signing this form, I acknowledge that I am 18 years of age or older, understand the study described above, and agree to participate in the aforementioned study.

Print Name _____ Date _____

Signature _____

_____ I have received a copy of this form to keep for myself.

Appendix B**Art Release Form**

Art Image Release Form: Bridge Drawing with Path

The artwork that you create during this study session will remain confidential. Your name will not be connected to your artwork. Photographs of the artwork will *only* be taken with your consent for the purposes listed below. Photographs taken of the artwork *will not* contain any identifying information.

I agree to have my artwork photographed without identifying information for the following purpose(s). **Please check all that apply:**

- ☐ Educational and training purposes
- ☐ Presentation at a professional conference
- ☐ Publication on a professional journal
- ☐ None of the above

I hereby give consent as noted above for the use of my artwork.

Print Name _____ Date _____

Signature _____

Please note that if at a later date you choose to withdraw permission for your artwork to be shown as noted above, it may be difficult or impossible to contain images already disseminated in public settings.

_____ I have received a copy of this form to keep for myself.

Appendix C**Demographic Form**

1. What is your age? _____
2. Which option best represents your race?
 - ☐ American Indian or Alaska Native
 - ☐ Asian
 - ☐ Black or African American
 - ☐ Pacific Islander
 - ☐ White
 - ☐ Other
3. Which option best represents your ethnicity?
 - ☐ Hispanic or Latinx or Spanish Origin
 - ☐ Not Hispanic or Latinx or Spanish Origin
4. Which option best represents your current gender identity?
 - ☐ Man
 - ☐ Non-binary/genderqueer
 - ☐ Woman
 - ☐ Not Listed: _____
 - ☐ Prefer not to state
5. What year did you graduate high school? _____
6. What year did you enter college? _____

7. If you were enrolled in college in March of 2020, did the mandatory stay-at-home order effect the way you attended college?

- ☐ Yes
- ☐ No

8. Please select your academic classification level:

- ☐ Freshman
- ☐ Sophomore
- ☐ Junior
- ☐ Senior
- ☐ I'm not sure

9. What are your current living arrangements?

- ☐ On campus
- ☐ Off campus – not living with parents
- ☐ Off campus – living with parents
- ☐ Other _____

Appendix D**Future Time Perspective Scale**

1. I look forward to the future with hope and enthusiasm.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

2. I have the sense that time is running out.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

3. My future is uncertain.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

4. When I think about the future, I expect good things to happen.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

5. I am beginning to experience that time is limited.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

6. You cannot really plan for the future because things change so much.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

7. I have little hope for the future.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

8. Increasingly I feel like time is against me.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

9. My future seems very vague and uncertain to me.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

10. Each new day and season presents me with interesting opportunities.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

11. I know that I do not have all the time in the world.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

12. I do not focus on the future because it is so uncertain to me anyway.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Appendix E**BDP Study Recruitment Flyer****HOW DO YOU ENVISION YOUR FUTURE?**

Participate in a research study!

WE WANT TO KNOW...

How college students visualize their future

TO PARTICIPATE YOU MUST...

- be between 18 and 25 years old
- be currently enrolled in a college or university

YOU WILL BE ASKED TO...

- complete a brief survey before making some art
- engage in a one-time, individual study session

For more information or to SIGN UP please contact
Debbie Mendez (ddmendez@albertus.edu)

**NO ART
EXPERIENCE
NECESSARY**

Appendix F

Debriefing Form

Debriefing Form: Bridge Drawing with Path

The purpose of this study was to examine the relationship between the Bridge Drawing with Path and how college students see their future. Research has shown that young adults who are in college are going through a normal phase of transition and change. The Bridge Drawing with Path specifies several image variables that are used to learn more about a person's view of their future and how they see themselves. The questionnaire you were given measures how you see your future and is scored into three different categories: future as open, future as limited and future as ambiguous.

The hypothesis is that there will be a significant relationship between a participant's FTP score and the graphic indicators that are found on the same participant's BDP assessment.

Risks are minimal in this study. Most participants experience a sense of enjoyment from engaging in the art activity. However, some individuals may feel mildly frustrated by the art materials or art-making process. Most participants enjoy answering questions about themselves, however, some individuals may experience mild negative feelings in response to some of the items in the questionnaire.

If you have experienced anything beyond a mild, transitory negative response, please feel free to discuss these feelings with the researcher.

If you need more support beyond that, please contact one of the community mental health services:

Cornell Scott – Hill Health Center Dixwell at (203) 503-3000

Connecticut Mental Health Center at (203) 974-7300

If you are a student at Albertus Magnus College, you may contact the Albertus Magnus College Counseling Center at (203) 773-8149 or counseling@albertus.edu

If you would like to know the results of this study, please provide your email address to the researcher. Please note that results can only be provided in aggregate.

If you would like to learn more about art therapy, please visit the American Art Therapy Association at www.arttherapy.org

For more information about the Bridge Drawing with Path art assessment:

Darewych, O. H., & Brown-Campbell, K. (2016). Measuring future orientations and goals with the bridge drawing: A review of the research. *Canadian Art Therapy Association Journal*, 29(1), 30-37. <https://doi.org/10.1080/08322473.2016.1166010>

Hays, R. E., & Lyons, S. J. (1981). The bridge drawing: A projective technique for assessment in art therapy. *The Arts in Psychotherapy*, 8(3-4), 207–217. [https://doi.org/10.1016/0197-4556\(81\)90033-2](https://doi.org/10.1016/0197-4556(81)90033-2)

Appendix G

BDP Manual

DIRECTIVE:

“DRAW A BRIDGE FROM SOMEPLACE TO SOMEPLACE. THE BRIDGE CONNECTS TO A PATH. DRAW THE PATH AND WRITE WHERE THE PATH LEADS YOU TO. USE AN “X” TO INDICATE WHERE YOU ARE ON EITHER THE BRIDGE OR THE PATH”

In this manual, the researcher provided their own illustrated examples of each image variable code so that raters would not be distracted by line quality and other formal elements.

BDP Rater Information

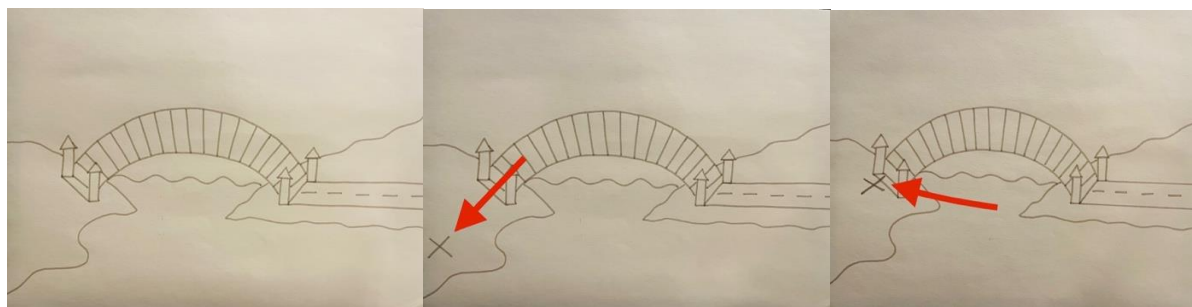
As a BDP image rater, you will be rating monochrome images drawn with a No.2 lead pencil on a sheet of 9” x 12” white drawing paper. As an image rater, you are being asked to rate six BDP image variables detailed in this manual. Variable #7 (written associations) should be rated separately, after the scoring of the 6 image variables.

Image Variable #1 – Placement of Self in Picture

NOTE:

If only part of the X is touching the bridge or the path, score the drawing based on where the lines of the X intersect [see CODE 1(b) & CODE 3(b)]

Code	
0	If there is no indication of self in the image
1	If placement of self is before the bridge
2	If placement of self is on the bridge
3	If placement of self is on the path



CODE 0

CODE 1(a)

CODE 1(b)

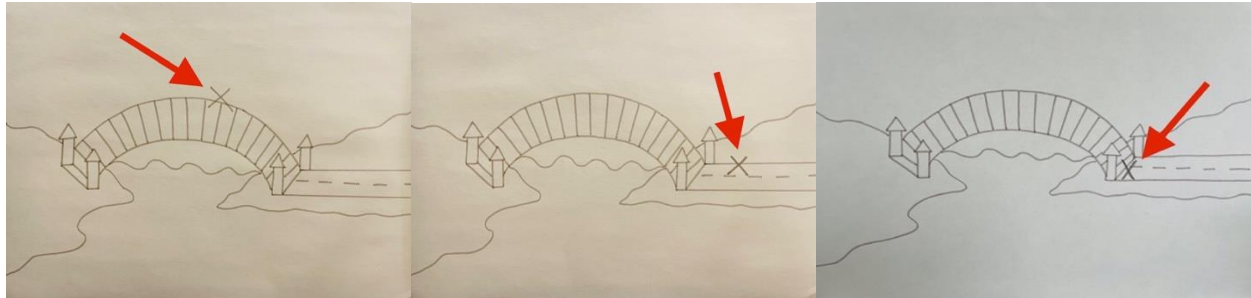
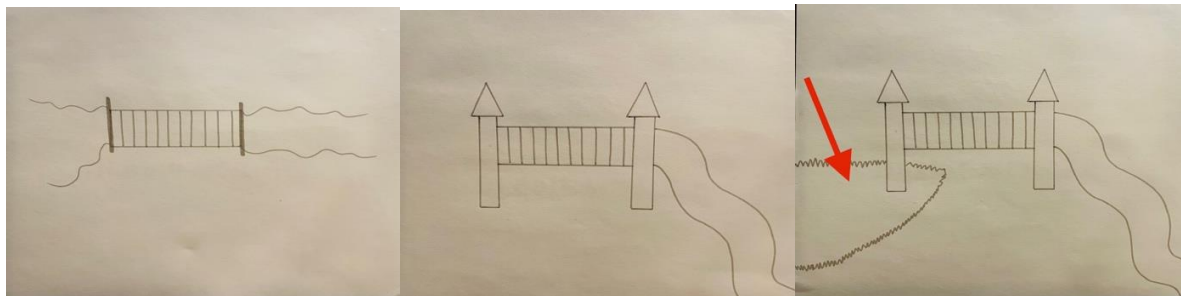
**CODE 2****CODE 3(a)****CODE 3(b)****NOTE:**

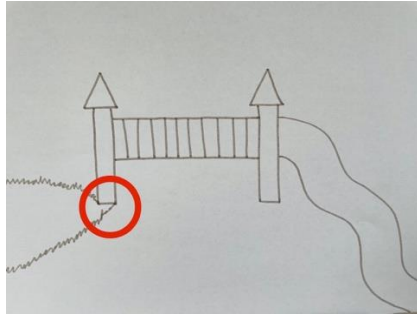
Image variables 2 & 3 look similar but are two very different markers. Variable #2 is specific to the bridge being attached to land masses. Variable #3 is specific to additional supports and reinforcements that are found beneath the bridge.

Image Variable #2 – Solidarity of Bridge Attachments (on either side of the bridge)**NOTE:**

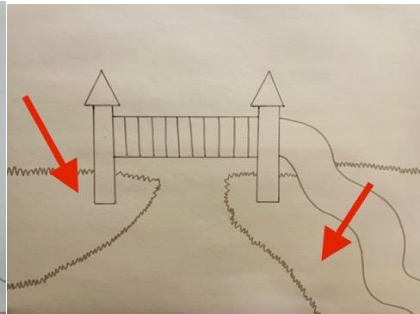
The path itself is not to be considered a land mass.

Code	
0	Not able to rate / ambiguous or no obvious attachments on either side
1	If bridge is floating / not attached to land on either side
2	If bridge is partially attached to land on one or both sides
3	If bridge is clearly and securely attached on both sides

**CODE 0****CODE 1****CODE 2(a)**



CODE 2(b)

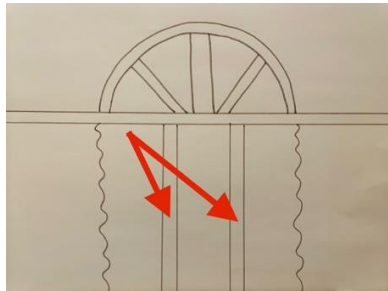


CODE 3

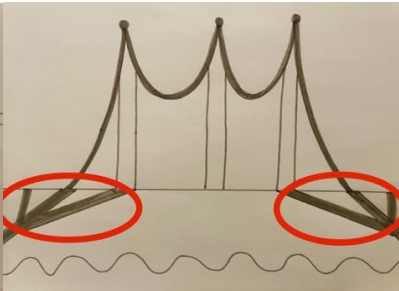
Image Variable #3 – Bridge Attachments

Are there additional supports and/or structural reinforcements attached to/under the bridge?

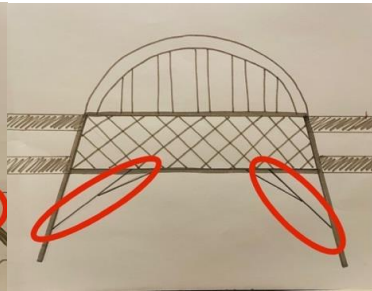
Code	
0	No
1	Yes



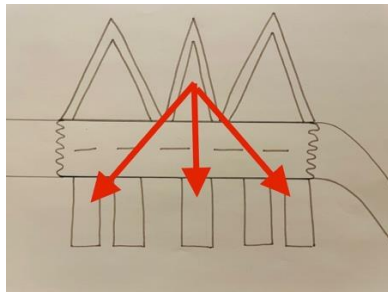
CODE 1



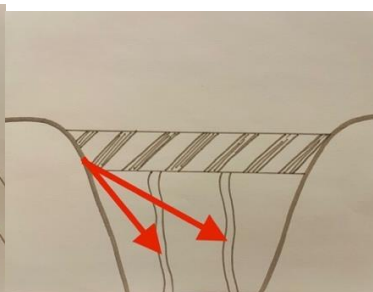
CODE 1



CODE 1



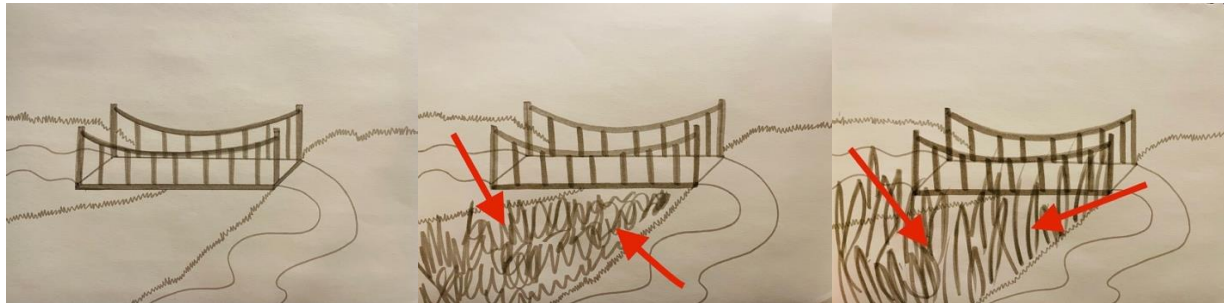
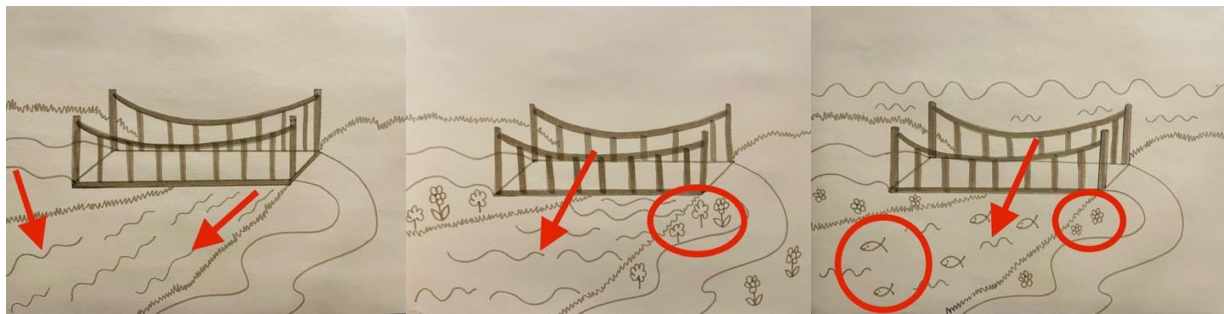
CODE 1



CODE 1

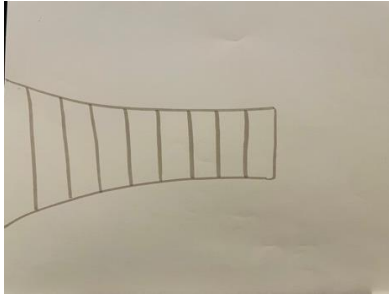
Image Variable #4 – Matter Underneath the Bridge

Code	
0	Not able to rate / nothing under the bridge
1	Matter under the bridge is threatening in nature (negative imagery: troubled water / natural disaster / debris)
2	Matter under the bridge is neutral (water only)
3	Matter under the bridge is non-threatening in nature (positive imagery: with life / growth)

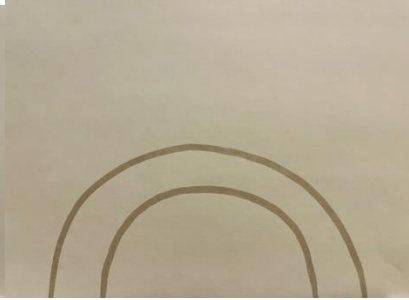
**CODE 0****CODE 1****CODE 1****CODE 2****CODE 3****CODE 3****Image Variable #5 – Bridge Construction****NOTE:**

This image variable looks and both formal qualities as well as content that suggests fragility/stability of the bridge.

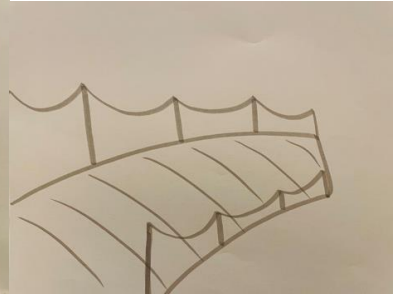
Code	
0	Not able to rate / no bridge/ little or no details / no way to determine structural integrity
1	Bridge is poorly constructed integration/ line quality /fragile
2	Bridge is adequately constructed
3	Bridge is well constructed



CODE 0



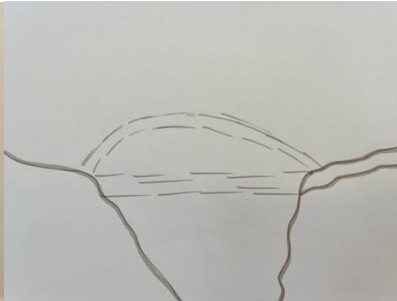
CODE 0



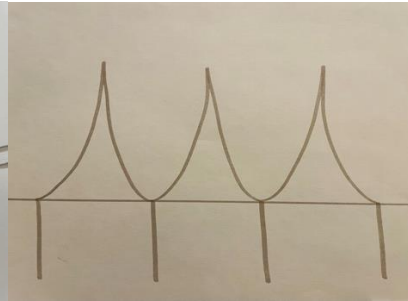
CODE 1



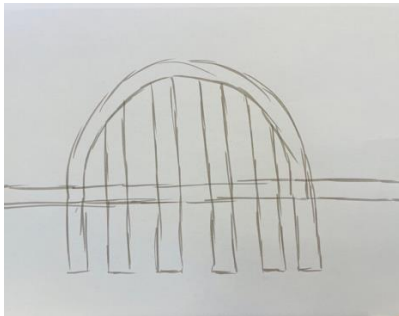
CODE 1



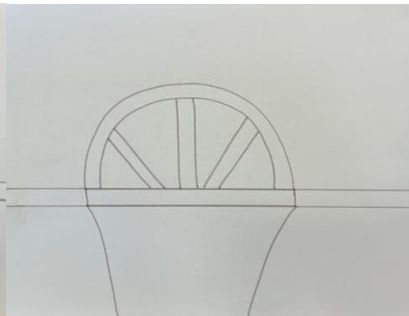
CODE 1



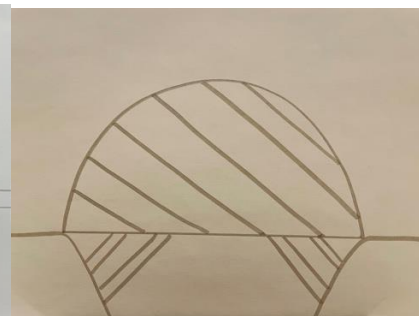
CODE 1



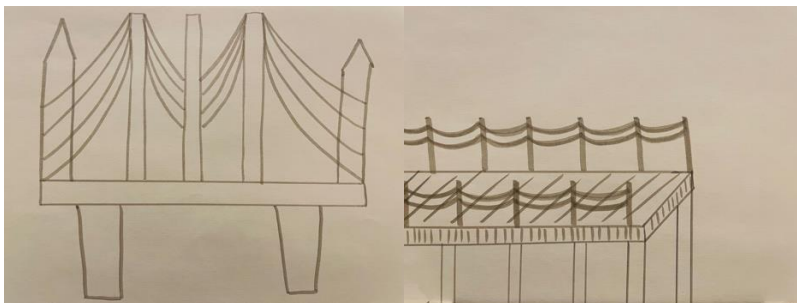
CODE 2



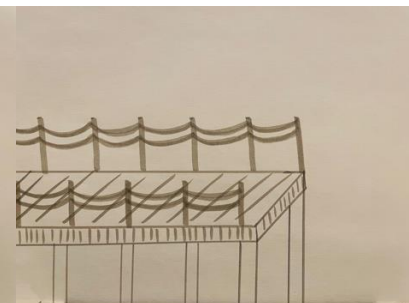
CODE 2



CODE 2



CODE 3



CODE 3

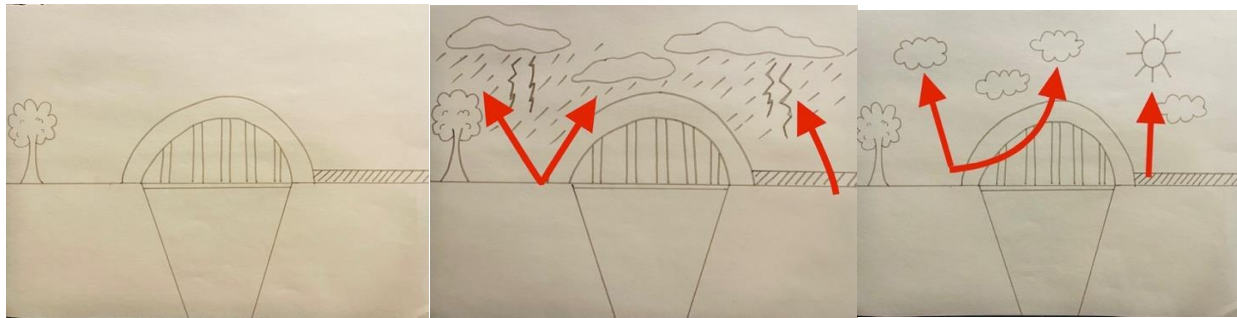
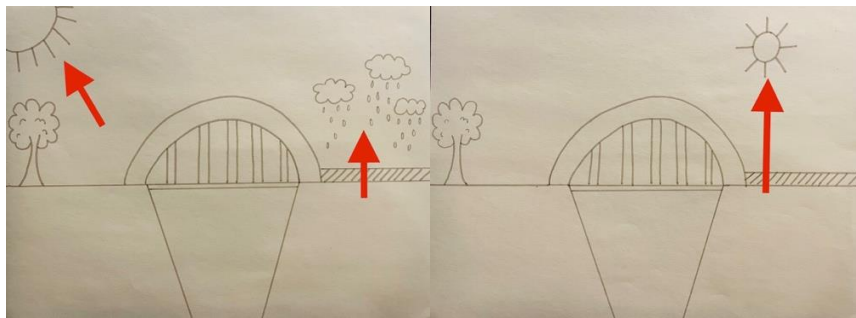
Image Variable #6 – Weather

Code	
0	Not able to rate / no weather included
1	Weather is threatening (rain only / clouds only / rain and clouds)
2	Weather includes multiple indicators / combination of weather indicators (sun and clouds / sun and rain)
3	Weather shows sun only

NOTE:

A circle in the sky (no perceived “rays” attached to it) is to be assumed a sun.

A moon in the sky should be coded as a “0” as it is not an indication of weather.

**CODE 0****CODE 1****CODE 2****CODE 2****CODE 3**

Variable #7 – Written Associations

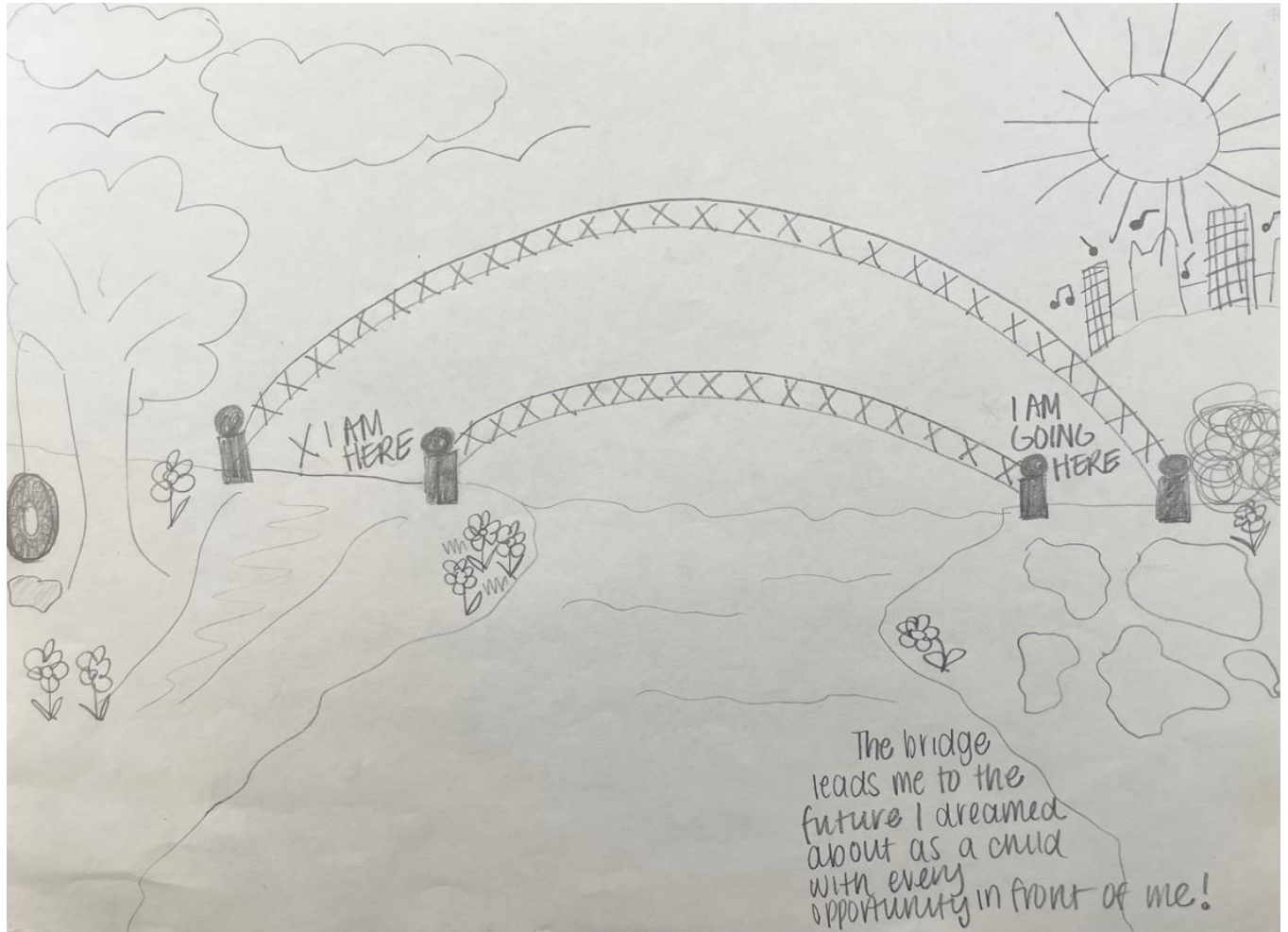
Indicate the key word written on the path or near the path. For a written association with multiple words or phrases, determine and code the key word. Insert secondary words in the ‘secondary written association’ column located on the excel coding sheet. Example 1: “This path leads to the future...peace, satisfaction, smiles, understanding, even more insight, freedom, accomplishment of difficult tasks.” In this example, the key word future is present. Thus, one would code 6 for image characteristic #7 and code 10 (other comments) under the ‘secondary written association’ column. Example 2: “My path to autonomy and complete self-reliance...a path home.” In this example, the key word home is present. Thus, code 0 for image characteristic #9 and code 10 (other comments) under the ‘secondary written association’ column.

Code	
0	Home
1	Family & Friends
2	Nature
3	City / Country
4	Education
5	Career
6	Future
7	Symbolic; heaven-hell / God / fantasy / spiritual
8	Opportunities
9	Unknown / Somewhere
10	Other Comments
11	No Comment

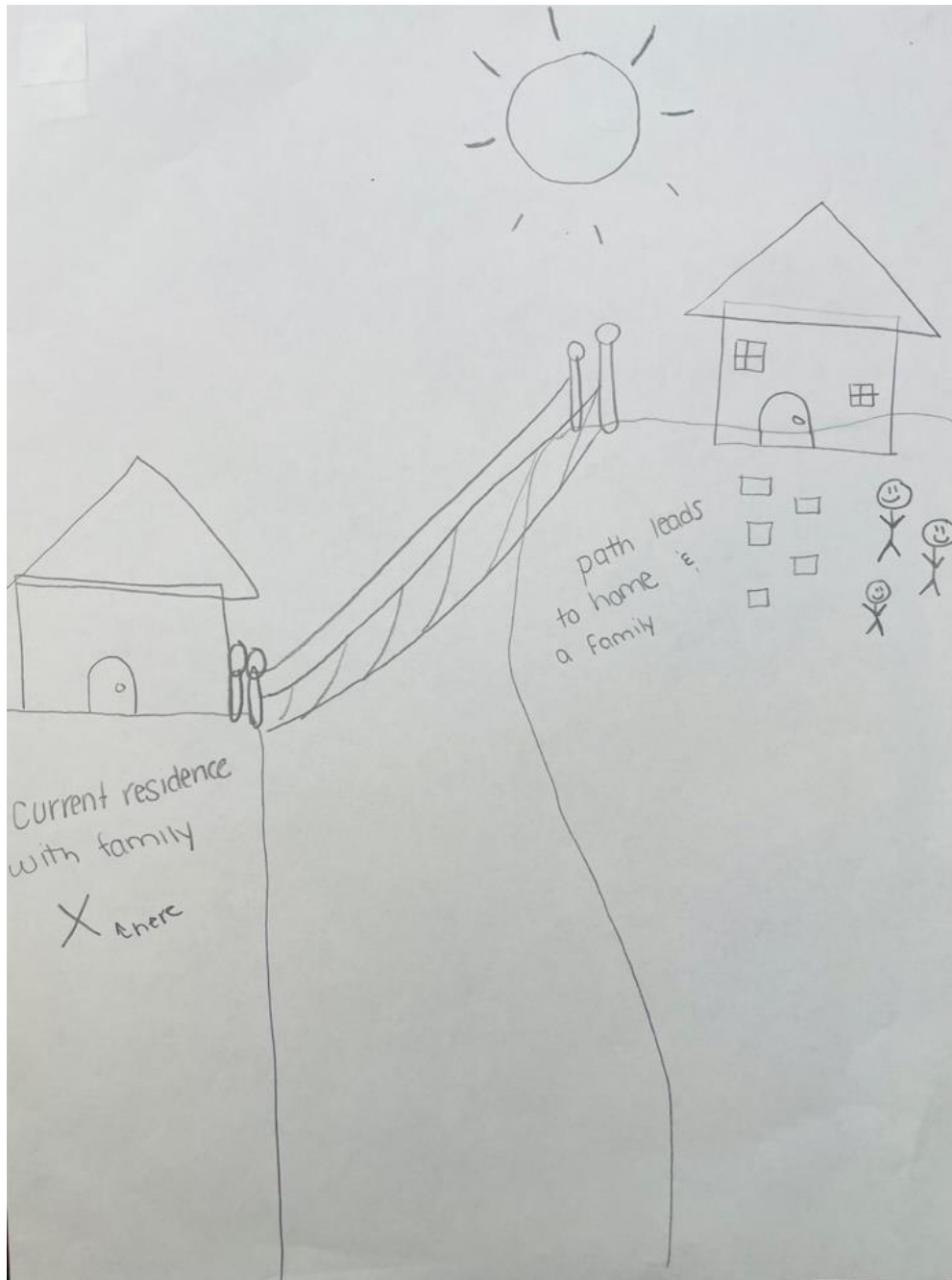
[illegible]

Appendix I

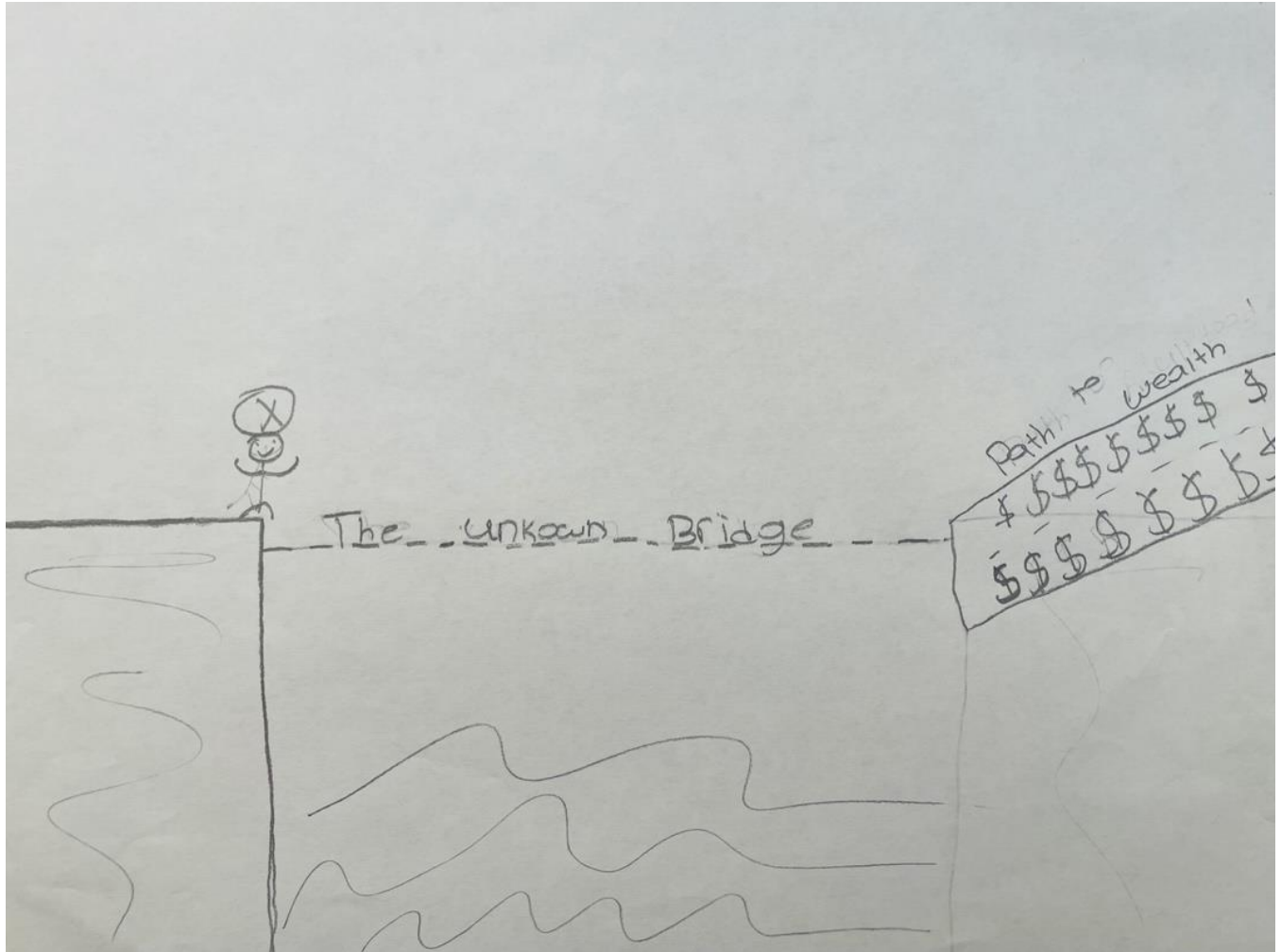
Figure 1

Sample Drawing

Note. A BDP assessment drawn by a 21-year-old female participant whose FTP scores were: high in future as open, low in future as limited and low in future as ambiguous.

Figure 2*Sample Drawing*

Note. A BDP assessment drawn by a 24-year-old female participant who scored high in future as open, high in future as limited and medium in future as ambiguous.

Figure 3*Sample Drawing*

Note. A BDP assessment drawn by a 20-year-old male participant who scored medium in future as open, high in future as limited and high in future as ambiguous.